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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,452	09/05/2003	Frank Taormina	PD-980042D	1452
20991 7590 09/13/2007 THE DIRECTV GROUP, INC. PATENT DOCKET ADMINISTRATION CA / LA1 / A109 P O BOX 956 EL SEGUNDO, CA 90245-0956			EXAMINER DINH, TIEN QUANG	
			ART UNIT 3644	PAPER NUMBER
			MAIL DATE 09/13/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/657,452	Applicant(s) TAORMINA ET AL.	
	Examiner Tien Dinh	Art Unit 3644	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-18 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/14/07</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draim (5979832) in view of McLeod 3618097.

Draim 5979832 discloses at least four position adjustable satellites (116, 118, 120, 112, etc. see figure 2) that are on MEO (column 1, line 48-49) and on the equatorial plane and spaced apart but is silent on the fixed one-dimensional antenna and the two-dimensional tracking antenna. However, McLeod discloses that one-dimensional antenna and two-dimensional antenna (see column 2, lines 69-75) on a ground terminal are well known.

It would have been obvious to one skilled in the art at the time the invention was made to have used fixed one-dimensional antenna and the two dimensional antenna with the ground terminal in Draim's system as taught by McLeod to allow the communication system to send more information to desired spots and to keep track of the whole satellite system. The use of both a one-dimensional antenna and two-dimensional antenna in Draim's system would clearly provide redundancy and greater control scanning. In view of the KSR v. Teleflex, applying a know technique (such as using a two dimensional antenna with a one dimensional antenna) allows greater controls scanning and a good back up if one antenna were to fail.

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Re claim 9, please note that the satellites are position-adjustable since it has to be launched from earth and deployed from a booster with deployment means such as small rockets. Plus, satellites with rockets/thrusters on them to change its positions are well known in this day and age. If applicant disagrees with this, the examiner takes official notice. It would have been obvious to one skilled in the art at the time the invention was made to have used thrusters to position the satellite to the correct orbit. Please note that Draim discloses satellites that are spaced apart so that other satellites can be interleaved therebetween.

Please note that the ground terminal being fixed is well known since buildings are rooted. See TV, satellite ground stations, etc. Please also that a terminal can be fixed since this merely involves routine method that one skilled in the art can use to make sure the terminal doesn't move.

Please note that ground terminal that provides network operational control/satellite position control/communication link (such as phone line, cable/tv lines, etc. is well known in this day and age. One skilled would have used ground terminal that provides network operational/satellite position control to allow the satellite to safely and efficiently provide signals to the desired spot.

Re claims 16 and 17, please note that satellite 126 is interleaved between satellites 114 and 116. Satellite 128 is interleaved between 112 and 114. Other satellites are also interleaved in figure 2 also. This can increase the elevation angle at populated elevations. See claims 7-9.

Re claim 18, since there are many rings of satellites and they can be inclined (see claims 8 and 9 of Draim), one skilled in the art would have used additional satellites that have the same orbital inclination. These additional satellites would also be inclined and be in MEO to act as

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redundant satellites. The examiner also takes official notice that inclined MEO satellites are well known and that one skilled in the art would have used inclined MEO satellites to provide greater coverage of the Earth.

In view of the appeal brief filed on 6/1/07, PROSECUTION IS HEREBY REOPENED.

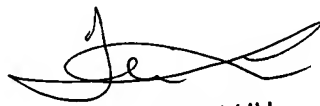
The new ground of rejection is set forth above.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:



TERI PHAM LUU  
SUPERVISORY  
PRIMARY EXAMINER